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THE

PHYTOLOGIST.

A BOTANICAL JOURNAL.

'Ως ἐμεγαλύνθη τὰ ἔργα σου, Κύριε!—πάντα ἐν σοφίᾳ ἐποίησας.
ΨΑΛΜ. *ργ΄*. 24.

Benedicite universa germinantia in terra Domino; laudate et superexaltate Eum in secula.—*Hymn. iii Pueror. v.* 76.

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MR. SPRUCE'S BOTANICAL COLLECTIONS IN SOUTH AMERICA.

The Extensive Collections of Brazilian Plants, collected during the long period of about fifteen years, and from an immense extent of that remarkable South American Empire, by Mr. Richard Spruce, are now in part ready, and the remainder are in forward preparation for distribution, to Subscribers and Purchasers; a glance at the statement below of such Sets as are still remaining on hand, and are now ready for delivery, as well as the List of such as are nearly so, will at once convey the best idea of the importance of these most interesting Collections of Brazilian Plants. An extract from one of the latest of Mr. Spruce's letters will also be helpful in forming an opinion of their value.

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Guayaquil, January, 1862.

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KENTISH BOTANY.

Romney Marsh, its general Aspect, Formation, and Vegetation.

Our readers will, it is presumed, have a better idea of Romney Marsh when they are reminded that it is a miniature Delta, of which there are several in the world besides the famous ancient Egyptian Delta.

It has not the shape of the Greek letter *delta,* neither is it so large as the *deltas* of the Amazon, the Ganges, the Indus, or of the Nile, but it has been formed on principles, and by natural operations, exactly similar to those which have produced the alluvial deposits at the efflux of the above-named celebrated rivers.

It may be conceded that the Rother, the chief or sole river in Romney Marsh, is not so large as the Nile, neither are the two towns situated at its eastern and western extremities, quite as large, and of as eminent historical fame, as Alexandria and Damiètta. But both Rye and Hythe are ancient towns, and probably as old as their Egyptian rivals, although not so celebrated.

The Nile is reputed to have seven mouths, by which it discharges its waters into the Mediterranean; the Rother has probably as many, but individually and collectively they contain and convey less water to the ocean, because Kent is much smaller than Egypt and Abyssinia.

The analogy nevertheless is perfect; *parvis componere magna,* a dwarf may fitly be compared to a giant, only he is not so big. Romney Marsh, its river with its numerous outlets, its towns and its aspect, may be called a miniature representative of the great deltas formed by rivers which flow thousands of miles. It may be truly assumed that all reading people have read more about Egypt than they have about their own native land, and *à fortiori* that they know infinitely better what is the nature and aspect of the delta of the Nile, than they do about the formation and general appearance of the delta of the Rother, *i.e.* Romney Marsh. The principal branch of this river now enters the English Channel two miles south of Rye, and there are other streams or drains, or guts, as they are called here, which convey the water from the interior of the marsh, and discharge it into the sea at or near Lydd, Dymchurch, etc. The principal stream once flowed into the sea at New Romney, but in King Edward I.'s time it was diverted or turned out of its ancient course by a

BRITISH MUSEUM

storm which visited these parts. This change of channel was the primary cause of the decay of New Romney.

The entire surface of Romney Marsh is flat; its greatest elevations are not above twenty feet above the usual flood-tide; and these elevated parts are, first, the water-barriers, which protect the marshes from inundations; second, the beach, which is mostly composed of water-worn pebbles; and third, the hummock of sand at Lydd.

The whole extent of this flat is intersected by innumerable ditches, usually quite full, and on their margins and under and on the surface of the water there is abundance of most luxuriant vegetation. The common productions of these wide, open drains are reeds, rushes, pond-weeds, the usual aquatic and marsh-loving plants of England. The rarer species, which are not very numerous, will be more distinctly noticed in the sequel.

The most prominent of the common plants is *Scirpus maritimus;* the rarer species, with ample notices of their precise location, statistics, etc., will appear in the account of our peregrinations through this district.

The plants of Romney Marsh are connected by the common character of palustral or aquatic or maritime vegetation; they consequently form but one class, which will be sufficiently illustrated in the following brief notice of our walks in this marshy, uniform, and rather uninteresting tract.

We left Margate for Romney Marsh on Monday morning, the 13th August, one of the very warmest days of the warmest month of the warm summer of 1861. Our train reached Ashford between ten and eleven o'clock in the forenoon, where there was a delay of half an hour, till the train to Rye, Winchelsea, and Hastings reached our station. This latter train conveyed us to Appledore, through Ham Street, in less than half an hour.—*Note.* Romney Marsh may be said to commence on this the north side of Ham Street; for here the *Althæa officinalis,* the most ornamental and the most abundant plant of these parts, made its first appearance. Here it was very conspicuous, as it was everywhere else, and at this late period of the year was in perfection.

At Appledore station, which we reached about twelve o'clock, we alighted, and walked to the town or village, which is a mile and a half from the railway; the way is by the Rye road, and it may be varied by turning to the left, and taking the path through the meadows, a tract more conducive to botanical purposes.

Appledore is said to be a corruption of *Apple-tree,* and it is not a very remote or unreasonable etymology, though Apple-trees are now as rare in Romney Marsh as Dr. Johnson fancied trees were in Scotland.* Like many other places in Kent, it was better known and more celebrated when it was washed on two sides by the sea, which is now several miles distant from the village. In 793 it was plundered by the Danes, the scourge of this part of England in the Anglo-Saxon period. In the reigns of Edward III. and Richard II., the sea reached Appledore, as we learn from Dudgale's great work on the drainage of the Fens, etc., of England. (See Dugdale, p. 43, and *infra.*) Its condition in the sixteenth century is described by our great antiquary Leland in the following terms:—"Appledor of sum is countid a membre of Rumeney, is a market town and hath a goodly chirche in Kent and our Ladye of Ebery in Oxeneye toward a X myle by cumpace and cumpaced about with salt water, except where it is divided by fresh water from the Continent, part in Kent and part in Sussex."—Leland, vii. 142.

We looked about Appledore during an hour or more, but could see no traces of the sea. It is now surrounded by rich meadow-lands, from which the natives were carrying the produce, which, for so fertile a locality, was not very abundant last season. There are however some trees at Appledore,—not fruit-trees, only Willows, Poplars, and other water-loving species.†

On our way to and from Appledore we observed abundance of Marsh-mallow, *Althæa officinalis.* This plant at this season, August 13th, was in great luxuriance and beauty, and it was seen in all our future peregrinations; we never lost sight of it for ten minutes, except when we were botanizing on the beach near the sea, and these amounted to some forty or fifty miles; but there was scarcely so much as a hundred yards of our journey where this plant did not line the roadsides or crown the margins of the ditches, with its tall stems, clothed with its soft, velvety, pale-green, or hoary leaves, and crowned by its large showy pinkish or rosy flowers.

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* While the Doctor was travelling in Scotland, he lost a huge stick of his in the treeless island of Mull. Boswell told him he would recover it; but the Doctor shook his head. "No! no!" said he, "let anybody in Mull get possession of it, and it will never be restored. Consider, Sir, the value of such a piece of timber here."

† Trees were once plentiful in the Marsh, and near Appledore, as any one may see, for many huge logs dug up during the formation of the railway are lying on the meadows along the line. These black shapeless masses of half-decayed timber appear to be oak.

The town or village of Appledore was not sufficiently central for a station from which we could perambulate the Marsh in all directions, and indeed its inns were not first-rate. Superior accommodation, like that obtainable in Thanet, is not to be expected in Romney Marsh. The hostelry capabilities of Appledore are of a humble kind, as we learned by experience; therefore we returned again to the Appledore station to ask the way to New Romney, which is said to be ten miles from the town of Appledore.

We were told to go straight ahead towards the east, neither turning to the right nor to the left hand; and we were further told that the distance was eight miles from the station. A public conveyance on a road through a country where there are only a few detached houses here and there, and these occupied by farmers, who keep their own conveyances, was not to be expected. The town population of Lydd make use of the Appledore station, and the people of New Romney go to Ham Street when they want to meet the railway trains.

About two o'clock we left the station, and walked very gently, for the heat was intense, and the road not remarkably smooth, nor agreeable for pedestrians. It was not quite so disagreeable as walking on the pebbly beach about Dungeness, which tired our toes and tried our patience. Our road passed by Snargate, Brenzet, and Brookland, churches rather than villages; the former are not very scarce compared with the small population.

The only notable plant observed during this our long walk to New Romney, was *Nymphæa alba*, var. *minor*, which grew in a very deep, broad ditch before coming to Brookland, probably about a mile from Appledore station. In the same place were *Butomus umbellatus*, *Nuphar lutea*, *Potamogeton natans*, and other common aquatic plants, especially *Hydrocharis Morsus-ranæ*, which flowered profusely the last summer, 1861.

After walking a couple of hours or so on this pebbly, dusty road, under a scorching afternoon sun, we reached Old Romney, which is now reduced to a few scattered farmhouses, and a small, solitary church, which is a furlong or more from the road. Before reaching this ancient town, about two hundred yards from the road which branches off to Lydd, by the roadside we observed a few plants of *Crepis biennis*. The bank on the left-hand side was for a quarter of a mile dotted here and there with these plants. This was the only locality in Romney Marsh where this species was observed.

The following account of this very ancient seaport is from Lambarde's 'Perambulation of Kent' (page 197):—"There be in Kent therefore two townes of this name, the *Olde* and the *New Rumney*; as touching the latter whereof I minde not to speake, having not hitherto founde either in recorde or hystorie anything pertaining thereunto; but that little which I have to say must be of *Olde Rumney*, which was long since a principal port, and giveth cause of name to the new towne, even as itselfe first tooke it of the large level and territorie of marishe ground that is adjoining."

"In the time of Godwine, Earl of Kent, this haven was invaded by him and his sons, who 'led away all such ships as they found in the harborow there.'"—Lambarde, 198.

In Hasted's time, 1785, the village of Old Romney consisted of "about fifteen mean, straggling houses, with the church in the midst of them, where it is much sheltered by trees, which gives it a more pleasing appearance than any part of the adjoining country, which, as well as the rest of this parish, is an open, unsheltered flat of marshes."—Hasted, 518, vol. ii.

The houses around the church have disappeared. The trees are still there, or some of them, and they give to this remnant of a very ancient town a more pleasing appearance than any part of the adjoining country.

Old Romney, said to be on a hill, which is so small that we did not see it, is probably not more than two or three yards higher than the level of the sea at spring-tides, and was at an early period one of the Cinque Ports, though it is now from three to four miles distant from the sea.

New Romney is two miles beyond its more inland, and—if we can trust the name—its more ancient namesake.

In the time of Hasted, the historian of Kent, New Romney was exactly what it is now, a decayed and decaying town like Sandwich, only more desolate in appearance. It was a flourishing town in the reign of Edward the Confessor, and continued in this condition till Edward I.'s reign, when the river Limen or Rother was forced from its old channel by a tempest, which destroyed great part of the town, and several adjoining villages. "After this calamity the town never regained its former consequence, but continued to decay from time to time afterwards."

In its early days it had four churches besides the present one, and contained eighty-five burgesses. It has now, 1784, one hundred houses and five hundred inhabitants.*

The list of the scarce plants found growing in or near this place in Ray's time, the seventeenth century, is not a long one, but some of them are found there no more, viz. *Urtica romana*, Roman Nettle, *Bifolium palustre*, Marsh Ophris, or Twayblade, *Mercurialis annua glabra vulgaris*, French Mercury; near Brookland, in this marsh, *Buglossum parvum longifolium, minimo flore*, the little long-leaved Bugloss, with a very small flower. (Merrett's 'Pinax,' p. 17.) *Asperugo procumbens? Halimus sive Portulaca marina*, common Sea Purslane; in Romney Marsh, *Atriplex portulacoides*. (Ray, 153.)

In Leland's 'Itinerary,' quoted in Gough's 'Camden,' there is the following notice of this ancient member of the Cinque Ports, alas! a port no longer:—"Rumeney is one of the V. ports, and hath bene a metely good haven, yn so much that withyn remembrance of men, shyppes have cum hard up to the towne and cast ancres in one of the churchyards. The se is now a ii. myles from the towne, so sore thereby now decayed that where there wer iii.

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* "New Romney (either the Old or the New) seems to be the port of the Romans, so termed, and that either from the Greek *Limeen*, a port according to Leland, or *Limeen-palus*, a moor or fennish place, as the soil hereabout for many miles is none other, which Ethelwerd's 'Linneus Portus,' and the old writings of the parish and deanries name of Limne or Limpne, seem to favour. Romney, I say, as I conceive, was that Roman port Lemanis, which, although at present and for some hundreds of years lying dry and unbestead of any channel of fresh water to serve it, yet had of old a fair and commodious river running along it, and unlading or emptying itself into the sea, in those days nothing so remotely from the town as (by the sands and beach in process of time cast up and unbeaten by the sea, and for the want of the fresh to repel and keep it back, stopping up the harbour) since and now it is. This river, the Rother, flowed by Appledore, and from thence to Romney."—*Somner on the Roman Ports and Forts in Kent.*

Note to Somner's assertion that Romney is Portus Novus of the Romans.—Both Lambarde and Camden give this honour to Hythe, and their view is favoured by etymology, viz., Greek, *Limeen Kainos;* Latin, *Portus Novus;* Anglo-Saxon, *Hythe*. The modern Lym or Lympne, West Hythe, and Hythe, are still in existence, to testify to the accuracy of our great antiquary, Camden.

great paroches and chirches sumtyme is now scant one well maynteined."—Leland's 'Itinerary,' vii. 142.

We walked down the main street of New Romney and back again, like the King of Spain, who led his army up the hill and led them down again, as the nursery legends relate. The appearance of the town did not induce us to lodge here, and we walked on to Lydd, which was only three miles further, and here we baited and rested for the night. There is a nearer way than the one we took, viz. the road which branches off to the right at Old Romney. This would have saved two or three miles.

There is a very pleasant walk from New Romney to Lydd, across the meadows and over the sandhill, at the extremity of which is the little town of Lydd, which was a pretty and considerable market town when visited by Petiver and Sherard in 1714. (See 'Phytologist,' vol. vi. p. 117.)

The following description of this ancient town, from Leland's 'Itinerary,' shows what mutations it has undergone since the sixteenth century:—"Lydde is counted as a parte of Rumeney, and is a iii. myles beyond Rumeney Town and a Market. The town is of a prety quantite, and the towneseh (townsmen) men use botes (boats) to the se, the which at this time is a myle of. The hole town. is conteyned in one paroche, but that is very large. In the mydde way (or their about) betwixt Rumeney town and Lydde the marsch land beginneth . . . and contynneth a prety way beyond Lydde, and running into a poynt y^t standeth as an armed foreland or a nesse. Their is a place beyound Lydde where as a great numbre of Holme trees groweth upon a banke of baches (shingle?) throwen up by the sea, and their they bat (catch) fowle and kill many birdes."

Next morning, the 13th of August, we started about half past five o'clock to go to the Woolpack Inn, near Brookland, to meet a friend from London. This walk, which was about six miles, yielded nothing which we had not previously seen, except Dwarf Elder (*Sambucus Ebulus*), which grew by the roadside, a mile or further from the Woolpack, on the road from Lydd to Rye.

After breakfasting at the Woolpack we went into the Marsh to see the natives duck-driving, not a very exciting exercise. The custom in the Marsh is to breed large broods of ducklings under hens, and when the young birds are old enough to forage for themselves, they are turned out into the ditches. On certain days the *Marshlanders* assemble to drive their ducks when full grown; those fit for the market they carry off, and turn the rest back into the fen.

While we were watching the sport of driving the ducks, we had time to observe the vegetation of the depressed parts of the Marsh, which in winter are filled with water, forming shallow pools, and frequented by myriads of wild ducks, teal, widgeon, and other aquatic birds.

In August these shallows are comparatively dry, and the vegetation is very much the same as that which grows on muddy seashores. The maritime plants of the Chenopod order abound in these shallow depressions, viz. *Atriplex* and *Salicornia*. The latter, however, was not nearly so luxuriant nor so succulent as it is when in proximity to the salt water. The natives however assured me that it made an excellent pickle. This reminds us of the old saying, viz. "Boil a stone in butter, and the broth or *bree* will be good." Any vegetable substance, if fleshy, and not deleterious, will make a palatable pickle if the pickling condiments be savoury.

When our friend arrived we all set out for the seashore between Dungeness and Rye.

From Lydd to the seashore is a space of two or three miles; and the greater part of this space is covered by an extraordinary mass of shingle, pure shingle, nearly two miles wide, and extending round Romney Marsh from near Dymchurch, to beyond Dungeness towards Rye. The breadth of this singular bed, or mound, or ridge of pebbles, is not everywhere so great as it is about Dungeness Lighthouse, which is near the extremity of this projecting corner, and it is everywhere backed by rich meadows or cornfields.*

When cultivated, the shingle produces excellent, luxuriant crops of clover; wherever there is a bare covering of soil of but a few inches deep, the corn and even bean crops were the heaviest that we had seen. This was between the *Ness*, or point, and the town of Lydd.

The Flora of Dungeness did not appear to us to be a rich one.

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* The point of Dungeness gains so rapidly from the sea that it is said to have extended above one mile seaward in living memory. This extension is produced by the accumulation of shingle, which is in constant motion in this part of the Channel, from east to west.

A few *Leguminiferæ*, the Sea Pink (*Armeria maritima*), seen by Sherard and Petiver covering all the meadows on their road from Rye to Lydd (see 'Phytologist,' vol. vi. p. 117), and *Silene maritima*, were the prominent plants of this bleak and dreary region.

We did not see *Pisum maritimum*, which grew here in the reign of Queen Elizabeth three hundred years ago. The original authority for the location of this rare plant here is Camden (Dr. Dillenius uniformly (?) writes the name of our great antiquary, Cambden), who in his 'Britannia' tells us that "it grows among the stones on the west side of Dengeness, near Lyd, in Kent, in great plenty" (p. 319).

We looked into the deep drain or cutting through the great shingle bed, a sort of canal, here called by the cacophonous name of GUT. In this there were abundance of Potamogetons, and similar common aquatic plants, but none worth enumerating. The only rarity observed was *Lepidium Smithii*, and this was so near a cultivated field, that it was only after some considerable discussion admitted to be something different from *L. campestre*, which did not appear in this tract.

After being foot-sore with walking for hours on the bare rounded pebbles, and also wearied with our day's walk, which had continued, with little interruption, for twelve hours, we adjourned to the Dolphin Inn at Lydd, for rest and refreshment. This was our second night at this ancient member of the Cinque Ports.

Next morning, viz. the 14th of August, rose bright and bracing, putting on all the appearances of a fine and warm day. Our plan for this day's walk was to coast along shore as far as Dymchurch, and to return to Lydd by the interior. Therefore at an early hour our beds were quitted, and we soon left both inn and village far behind us. Our way was along the sandhill already described in our walk from New Romney to Lydd, on the 12th instant.

Before leaving Lydd, *Marrubium vulgare* was observed; and on the common, to the east, between Lydd and New Romney, several maritime plants grow, seldom seen so far inland. This extensive inland bank is of small elevation, probably not more than twenty feet, and there are both meadows and cornfields lying between it and the sea. The sand, which is pure sea-sand, is blown in heaps, but hindered from blowing further by the usual fibrous-rooted plants which grow naturally on sandhills by the shore, viz. *Psamma arenaria*, *Phleum arenarium*, *Carex arenaria*, Crow Garlic, Sheep's Scabious, and similar species.

This tract of sand is above two miles from the sea, and, as above said, cultivation has considerably diminished its extent, and it is probably destined, in these times of physical material progress, shortly to disappear. On the west the land is depressed into the marsh.

The path to New Romney leads through this sandbank, and then through the meadows; and a charming path it is, having the sail-covered sea on the right, and the extended treeless flat of Romney Marsh on the left, well backed by the heights near Tenterden, Eastbourne, etc. In the distance to the east are seen the cliffs about Folkestone, the camp at Shorne, and nearer to the spectator the towns of Hythe and New Romney.

At New Romney we halted for breakfast, and also for surveying the present state of this once celebrated town. Here we met with *Borago officinalis* and *Marrubium vulgare*, neither of them very abundant; *Carduus tenuiflorus* is plentiful everywhere in these bounds; *Chenopodium olidum* and *C. rubrum* are frequent.

In our way to Dymchurch we passed through the warren which is situated between New Romney and the shore. Here we were surrounded with horse-artillery, and had an opportunity of studying the mechanism and the exquisite finish of the Armstrong guns, the great peace-makers of our times. During our search for simples a field-battery was drawn up on the beach, and the practice began, but it did not interrupt our peaceful pursuits.

The warren plants observed were *Trifolium scabrum* and *T. suffocatum*, *Medicago minima*, and other more common Leguminifers; also *Silene conica*, now past its prime, like some of us who were looking for it, and perchance like some who are skimming this article. *Phleum arenarium* is nearly as plentiful as the pebbles.

From the warren we walked onwards on the Dymchurch road till we reached the beach, where *Eryngium maritimum* and *Glaucium luteum* were both very plentiful and beautiful on the bare shingle, while on the muddy hollow between this natural barrier of pebbles and the sea-wall, we saw abundance of *Frankenia lævis* growing on flat and wet gravelly parts, spreading over the surface like *Polygonum aviculare,* and at the base of the sea-wall it was hanging down, festoon-like, in masses upwards of a foot long. It was decided that this plant was never seen before in the South of England either more plentiful or more luxuriant than it is about a mile from Dymchurch. Near the same place grew also *Bupleurum tenuissimum,* not in great plenty, but the few examples were very fine.

The other common plants of these salt marshes were *Aster Tripolium, Lepturus filiformis,* Sea Orach, *Arenaria marina,* and other common maritime species.

As Dymchurch offers little attraction except its dyke, or sea wall, we were not induced to tarry here, and returned again to Lydd, not along the coast by which we came, but by St. Mary's to New Romney, and by old Romney to Lydd.

On our way back the chief plants that we saw worth recording were *Medicago maculata,* not so plentiful here as we saw it the previous season about Sandwich, Pegwell Bay, and Deal. In Romney Marsh it is comparatively a rare plant. Another capture was *Chenopodium murale,* which will pass muster only when rarer plants are invisible. This was our third and most successful day's botanizing in the Marsh.

On the 15th, a dull and somewhat drizzly morning, we walked from Lydd, where we passed our third night, to Appledore station to breakfast; and, on our way, took our final leave of the Water Lilies before mentioned, which grow near Snargate, or about a mile from the station. These plants, which mostly covered the stream,—it is barely a stream, for we could not tell which way it flowed, whether to the Rother at Appledore, or to the sea at Dymchurch,—or rather their leaves, varied from the size of the leaf of *Villarsia nymphæoides* to that of the largest we had ever seen in the Thames at Walton or Caversham bridges. There was a complete series of sizes; the increase was traceable through numerous steps of enlargement from the smallest to the greatest dimensions. The flowers do not vary so much as the leaves do. Few of them were in flower; but on passing along four days before, one of the medium size had a flower expanded, but on the dull, drizzly morning when we returned, there was not one with an opened blossom.

If *Nymphæa alba minor* be a good, *i. e.* a distinct variety, and if its characteristic distinction is founded on its small size, a score at least of distinct varieties may be established on the same characters, viz. the diversity of the magnitude of the leaves, etc., from the specimens which are to be seen in this part of Romney Marsh.

From Snargate to Appledore station is only a short mile. At the latter we refreshed ourselves by washing, dressing, and a substantial breakfast. While waiting for the train to Ashford we looked into the ditches close to the railway and saw abundance of *Potamogeton pectinatus*; the water was full of this weed, and the surface, as usual, everywhere in the Marsh, was covered with *Hydrocharis*, and the banks were lined and crowned with the pale rose-coloured large blossoms of Marsh Mallow, relieved with the still taller and not less handsome but commoner *Lythrum Salicaria*, Purple Loosestrife, now in full flower.

It may not be thought out of place to tell our readers who may visit the Marsh, that we did not see the yellow beauty, *Lysimachia vulgaris*,—no common plant, though it has a vulgar name.

Sium latifolium was found near Appledore station subsequently, after our party was broken up. We hope to have more to say about the plants between Appledore and Winchelsea on another occasion. Here our botanizing in Romney Marsh ended.

THE 'LONDON FLORA.'

The Editor has the pleasure of announcing that a new edition of the 'London Flora' is in contemplation, and contributions are earnestly requested. It may not be superfluous to state that this work has no connection with the 'Flora Londinensis,' the celebrated work of Curtis and Sir W. J. Hooker, but is a revival of a much humbler production, which appeared upwards of twenty years ago, and has now been for some considerable time out of print.

The following lines will contain a statement of the objects and limits of this new work with an old title, another candidate for the suffrages of botanists; and also tell something about the sources whence most of its materials will be derived.

The title 'Metropolitan Flora' would have been preferred, if the author had possessed a prior claim to the name of another book on the same subject, which was published a year or two before that which forms the subject of this notice.

As the name 'London Flora' is indefinite, and might legitimately denote that it embraced a greater or less extent than a single county, or part of a county, or all the contiguous counties, or part of them only, it will be necessary to define with some exactness the area or boundaries by which this work is to be limited. The proposed work will comprehend the natural phænogamous vegetation of the four metropolitan counties, Middlesex, Surrey, Kent, and Essex, and in addition to these such parts of the other home counties as are dovetailed with those above-named, viz. parts of Sussex, Hants, Berks, Bucks, Oxon, and Herts. The plants growing within forty miles of the metropolis will be included in this work.

It may be necessary, for scientific purposes, to regard rather the physical than the time-honoured political divisions of the country. In Kent and Essex the radius of the circle from London as a centre will much exceed forty miles; but seventy, or even eighty miles are practically nearer to town than thirty miles were some few years ago. Complete lists of the plants of the metropolitan counties will be given, and of the rest of the country comprehended under the name *environs* of London, as full accounts as can be furnished.

These are the extreme limits of the country to be included in the above-named work: within these bounds is the area of the 'London Flora.'

Secondly. The sources *now* available for the proposed compilation are, *first*, the somewhat ancient lists of Dr. Jacob, Richard Warner, and J. Blackstone: the last should have been first entered, for he was first in the field, and he has left two works for the benefit of posterity. For Kent there are, besides Jacob's 'Plantæ Favershamienses,' published in 1777, Mr. Cowell's 'Floral Guide to East Kent,' an excellent work, and the Rev. G. E. Smith's 'Botany of South Kent' (a catalogue of rare and phænogamous plants of South Kent); also a couple of 'Floras' of Tunbridge Wells, a district partly in Kent and partly in Sussex, the earlier by T. F. Forster, 'A Catalogue of Plants growing wild near Tunbridge Wells;' and a more recent work on the same subject by Mr. Jenner, published in 1846. In addition to these there are lists of Thanet plants; also a list of plants growing about Wye, near Ashford, in a recent work, and a 'Flora of Dover.' For Surrey there are the two 'Floras' of Reigate, Luxford's and Brewer's; also a manuscript list by the late Mr. Salmon and other Surrey botanists, etc. etc.

On the botany of Middlesex, we have one of the very earliest local Floras extant, viz. Blackstone's 'Catalogus Plantarum circa Harefield nascentium;' also the 'Flora of Harrow,' by a reverend contributor to the 'Phytologist;' and in the Editor's possession there is a manuscript list of plants which grow spontaneously near Hampstead. The Flora of Richard Warner, viz. 'Plantæ Woodfordienses,' with T. F. Forster's additions, is as yet our only printed authority for Essex plants, saving and excepting always the 'Botanist's Guide' by Turner and Dillwyn, and its more recent namesake by H. C. Watson, Esq.

In addition to all the above-named works, either in print or in manuscript, there are the Opuscula of Johnson, the celebrated editor of 'Gerarde's Herbal' and the *facilè princeps* (the prince) of the local botanists of his time. The 'Phytologist,' both the Old and the New Series, is a treasury of local botany all over the kingdom, and especially in the metropolitan counties. The 'Flora of Herts,' the lists of Sussex plants to be found in several publications, will be laid under contribution where the information they contain can be made available. These are the sources from which this new 'London Flora' is to be compiled.

Thirdly. The principle proposed for the arrangement or disposal of all these materials will be, as far as circumstances will admit, as follows:—

In the first place, all the plants usually called common, such as the Annual Poa, the Shepherd's Purse, the Common Groundsel, the Red Henbit, and other examples of species which occur everywhere, will appear in the catalogue without any special locality being entered, but with the habitats (situations where they usually grow). The rarer species (and a liberal construction will be given to this term, rare or rather rare,) will have their particular locations precisely described. It is believed that the publication will be more useful, especially to such as are commencing the study of botany, if the characters of the species, genera, and orders be briefly but plainly exhibited; and therefore the plan adopted in the original 'London Flora' will be carried out in the proposed work, as far as space will permit.

These definitions will contain only such technicalities as are indispensable; and they will be as short as is consistent with perspicuity; neither elaborate nor obscure, being rather distinctive than exhaustive.

Fourthly. The co-operation of all who take an interest in local botany is hereby requested; and a few hints are here suggested to show the benevolent the kind of information which will be useful. First, special notices of all additions of rare plants, in those districts which have been the subjects of local Floras, *e. g.* Harefield, Woodford, Faversham, Reigate, etc., viz. the plants which might have been overlooked hitherto, or have been introduced since the publication of these catalogues; and also lists of those species which have disappeared in the course of agricultural progress by improvements of the land, by enclosures, buildings, and all the physical mutations consequent thereon.

A series of queries on these subjects, viz. on the loss of certain plants and the gain of others, will appear from time to time in the 'Phytologist.' Answers to these queries, or any other original information about the location of rare plants, whether *old* or *new*, will be very useful; and the donors will have the pleasure of contributing to the diffusion of useful knowledge,—a service which will be duly appreciated, by all and especially by metropolitan botanists.

Fifthly. It may be worth while to state that all the phænogamous species spontaneous in the British Isles, will be appended to the metropolitan plants, and briefly described and located. The work consequently will be a *catalogue raisonné* of the 'London Flora' and also of the native phænogamous productions of Great Britain.

Lastly. The aim or object of the proposed work is the following. In the first place it is intended to supply a very urgent want, viz., that of a guide to the botany of the environs of London. Many of the great cities and towns of England, Scotland, and Ireland have works exclusively restricted to their spontaneous products. For example, Manchester has two Floral guides; Liverpool three —or she will soon have three; Bristol, Nottingham, Bath, Cheltenham, have their Floras. Reigate, a little town, has a brace of books on its botany. The parishes of Harefield, of Woodford, Askern, etc., are celebrated in the botanical literature of England. Is it not a reproach to the botanists of London, that they have not hitherto supplied what is confessedly a *desideratum*, a thing to be desired, a work on the botany of the environs of London?

Besides this, the intended publication assumes more of a utilitarian than of a sentimental character, when it is considered that there are thousands of young Æsculapians, or Nosologists, or Therapeuticians, studying at the many metropolitan hospitals of this great metropolis, and that all of them need a guide or a text-book as well to the localities as to the classification and sanative qualities of the various herbs which form the vegetable part of their Pharmacopœias and enter into their Galenical preparations, mixtures, embrocations, etc.

There are, besides the juvenile members of the healing arts, several amateur botanists resident in the metropolis, to whom a 'London Flora' will be a useful *vade mecum*. The botany of the metropolitan counties, though now well known, has to be gleaned from many sources, as has been above shown; and the intended new work will be a condensed epitome of all that is known about the spontaneous growth of the district at the date of its publication.

The provincial members of the fraternity who come up to spend a few days in London, will also herein get such information as they are likely to want, and such as they have not time to cater for themselves.

Finally, this work will be useful to neophytes who are only beginning to study the science. Here they will find it easier to puzzle out the names of the London species, than if they had to hunt them out in the entire collected plants of the British Flora.

Note. The compiler and editor of the proposed new work on Metropolitan British Botany, has been a resident in London, and occasionally in all the counties with which it is politically and physically connected, for nearly forty years; and his botanizing has been continuous and mostly confined to those counties. He has also associated and corresponded with the most eminent local botanists of the district during the afore-mentioned period, several of whom, alas, have departed to their rest, though their memory is still as green as a forest in leafy June; and he confidently expects that the assistance which he has often had the pleasure of acknowledging, will be forthcoming for his use in accomplishing his purposed undertaking.

His ambition is to produce a useful, substantial, and comprehensive work; one which will include the essence of several publications. His desire is to make it serviceable to the greatest number of students by brevity, simplicity, and perspicuity. It will be a genuine "Book of Knowledge" on the subject of London Botany; and, in imitation of the title of a book celebrated many years ago in nurseries and dames' schools, it may be called 'Botany made Easy,' or as the booksellers of those days abridged the name, 'Botany Easy' (Reading Easy).

There is a common but senseless sneer about the danger of a little knowledge, but it is not the "littleness" of the "learning" that is the "dangerous thing," but its incompleteness and inexactitude. The information supplied on the subject of metropolitan phytology will be neither inexact nor incomplete.

It may not furnish the student with the qualifications necessary for a public teacher, nor to occupy a professorial botanical chair; but it will qualify him or her for enjoying and admiring one of the fairest portions of the visible creation, and it will invest a walk, at all seasons and in all places, with an interest and a charm which is unknown to those who are unqualified to estimate the beauty of vegetation.

JOHN BLACKSTONE.

Some Account of John Blackstone, and a Notice of 'Fasciculus Plantarum circa Harefield sponte nascentium.' (*A Catalogue of Harefield Plants.*)

This celebrated London botanist, an apothecary in Fleet Street, and the author of the first complete local Flora which we possess, was probably born about the end of the seventeenth or near the beginning of the eighteenth century. He died in 1753. (See Pulteney, vol. ii. p. 273.)

The sole memorials of Blackstone generally known, are his Flora of Harefield—if our readers will excuse the anachronism, for the term *Flora* was not used then in its modern sense—and the *Specimen botanicum* quoted below. There is a copy of Ray's 'Synopsis,' the second edition of 1696, which has his autograph, and also that of Thomas Birch, Maii 16, 1753; hence it appears that this copy came into the possession of the latter owner the very year of Mr. Blackstone's death. The following note is in his holograph, "*Plantæ quæ in hoc libro hæc nota præfixa est* (×) *in nostro sicco horto asservantur*. J. Blackstone, 1736."

Our author appears to have had in his herbarium most of the plants of Ray's 'Synopsis.' In the margin opposite to the names of the *rariores* there are notes of fresh localities where Mr. Blackstone had seen them. These are chiefly in the home or metropolitan counties and in the adjoining shires of Bucks, Oxford, Wilts, Berks, etc.

This work on the botany of a single parish, is curious and valuable; for it is the *first* example of a complete enumeration of the productions of a small district, a tract containing probably not more than from sixteen to twenty square miles, and it has been the pattern which subsequent botanical topographers have successfully imitated. They could not have had a better model; for the *loci natales* (the localities)—as he calls their places of growth—are ample, precise, and satisfactory. Some of them, no doubt, have long ceased to produce the species which grew there in his time, because the land is now used for more important crops than *simples*. Though this is not to be regretted, still it is interesting to hunt out the remains of the ancient vegetation and ascertain the few species that still linger about the ancient *loci natales*, the former habitats.

We are indebted to this eminent LONDON SIMPLER for another work, one still more important to the historian of the anciently known localities of British plants, viz. SPECIMEN BOTANICUM, *quo Plantarum plurium rariorum Angliæ indigenarum* LOCI NATALES *illustrantur*. This was published in 1746, and contains 106 pages, and describes the *loci natales* of 366 species of the more uncommon, or unfrequent, or rare English plants. The arrangement is alphabetical, as in the Harefield List, and the work may be described as the first "Botanical Guide" to the British botanist.

In the catalogue (alphabetical) of the Harefield plants, Mr. Blackstone only quotes one contemporary botanist. Did he labour alone? Almost. He quotes the works of Parkinson, Gerarde, Merret, Petiver, Plukenet, Morison or Bobart, Ray and Lobel, all eminent English botanists; and among foreigners, Caspar Bauhin, Chabræus, Dillenius, Tournefort, and Scheuchzer.

The references to these celebrated Continental authorities prove that he was learned in the literature of the science.

The number of the Harefield plants is above 500, and they are contained in 112 pages: and there is an appendix to the book, of six pages, consisting of short notes relating to Harefield and its history. The preface, explanations, title, dedication, etc., fill up eight pages. The typography is good, and the appearance of the book very creditable.

The chief localities (*loci natales*), which, as before said, are well defined, are the lanes about Harefield, Harefield Common, and above all the chalk-pit near the paper-mill at Harefield.

The nomenclature is chiefly that of C. Bauhin's '*Pinax*,' with the synonyms of Ray, Gerarde, and Parkinson; other authors are sparingly quoted. There is no difficulty in identifying his ancient names with the modern terminology; for his synonymy, like his habitats, is clear and copious, and his references are exact.

So far as can be gathered from his work, he laboured alone; both in the collecting of his materials and in the compilation of his book. Mr. Ashby's name is the only one that appears as an authority; and this gentleman is quoted but *once*, viz. under *Fritillaria Meleagris*, as having known this plant as spontaneous in the neighbourhood, for upwards of forty years.

Our author acknowledges no other friendly aid; and hence it is inferred that he had no associates in this scientific labour.

The parish of Harefield is no longer in the same condition as it was when visited and botanized by the apothecary of Fleet Street. Its Common has shared the fate of many other commons, which we once knew as real commons; it has ceased to be common property for at least a century. Harefield itself is a good specimen of an English village, and has probably been unaltered and unenlarged in these days of physical or material progress, but remaining exactly as it stood in the days of Blackstone. The church, the rectory or vicarage, the manor-house, the park, the woods, the lanes, and especially the river, the meadows, the cornfields, with paths across, are still as in the days of old. There is the churchyard, the rookery, the inn, the mill, and probably the old chalk-pit. In spite of all the improvements, good botanizing about Harefield is still possible; for example, in the old park, early in the summer or late in the spring; and in the end of leafy June and in warm July, the Colne, with its ditches and meadows, and Bacher Heath, and the wild ground about Moor Park, are moderately productive.

Harefield at present is not very accessible from the Metropolis. There are two ways of reaching it; first by the London and Great Western Railway, leaving at Uxbridge; or by the London and North-Western, as far as Pinner station. From either of these two stations the distance to Harefield is five miles, and must be got over or along either by fly or the marrow-bone stage, the proper botanical locomotive power.

The following list of the rarer or more interesting plants of Harefield is presented to our readers with a double view; first, to induce them to visit a place so celebrated in the earlier annals of the science, where they may enjoy the country to their heart's content,—for surely no more secluded scene nor more rustic scenery exists within eighteen miles of the Metropolis. Secondly, with the view of learning what proportion of Blackstone's plants still grow in their ancient stations; and it would oblige the writer of this notice very much if those who are persuaded to tread in Blackstone's tracks, would tell him what species are still found at Harefield. We know some of those recorded in this list have disappeared for many years; it would be desirable to learn how many have survived, and how many have been introduced during the past hundred and thirty years.

The soil of this extensive parish is various. On the south and east it is strong clay, and produces both elm and oak; on the north and west it is chalky, marly, dry, and gravelly; along the Colne it is of course alluvial.

There are still many woods, and there is more open ground where the botanist may freely wander, than is to be found in most parishes near London, if we except Hampstead Heath, Barnes and Wimbledon Commons, and Dartford and Keston Heaths.

In the course of some months the railway will be extended u the valley of the Colne, from Uxbridge to Rickmansworth, o which there will be a station at Harefield, and whereby th London botanist may easily reach this charming locality in a hour.

The following queries are respectfully submitted to the kin consideration of our readers:—

1. Are there any local memorials extant, or any traditionary knowledge, which might throw light on Mr. Blackstone's connection with Harefield? Did he ever reside here? Or was he born here? Or had he any intimate friend or relation in this parish, whom he visited, and where he enjoyed a relaxation from the labours and cares of business?

2. How many of the following plants are still found at Harefield, or in its vicinity?

3. What new plants are now observed here?

Adoxa moschatellina. Old Park Wood, and many other places, abundantly.

Agrostis Spica-venti. Cornfields.

Alisma minima. By the sides of the Warren Pond, near Breakspears, plentifully.

Alisma minima ranunculoides. On the banks of the Upper Pond, near Mr. Ashby's brick-kiln, plentifully.

Aquilegia vulgaris. In woods and bushy places about Harefield, but not common.

Atropa Belladonna. In a shady gravel-pit near the Old Park, and in the gardens at Moore Park, plentifully.

Bupleurum perfoliatum. I observed it this year (1735) in a field of corn near Harefield Mill, but not plentifully.

Butomus umbellatus. In brooks and ditches, frequent.

Calamintha Nepeta. Roadside, from Harefield to Chalfont St. Peter's.

Calamintha vulgaris. Harefield Street, going to the river, but not very plentifully.

Campanula glomerata. Chalk-pit. Duke of Portland's, Gerard's Cross.

Campanula Trachelium. Old Park Wood.

Carex pulicaris. Harefield Moor.

Chenopodium olidum. Waste places, not frequent.

Clematis Vitalba. Hedges, everywhere.

Dianthus Armeria. Roadside, between Harefield and Chalfont St. Peter's.

Dipsacus pilosus. About Moore Hall; also in a little wood near Sir George Cooke's House, at Harefield, plentifully.

Epilobium angustifolium. By the side of a wood, midway between Beaconsfield and Uxbridge.

Equisetum sylvaticum. In woods, not rare.

Euphorbia platyphyllos. Cornfields, between Harefield Common and Battleswell.

Fritillaria Meleagris. In Maudfields, near Ruislip Common, observed above forty years by Mr. Ashby, at Breakspears.*

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* The country people call them "Snake's-heads." This is the first recorded British locality for the above interesting and uncommon plant.

Genista anglica. } Do these still grow at Harefield?
Genista tinctoria. }

Gentiana Amarella. In the old chalk-pit near Harefield mill.

Geranium lucidum. Lane leading to Harefield mill.

Gymnadenia Conopsea. Lane leading to Harefield mill.

Habenaria chlorantha, or *H. bifolia.* In woods and bushy places, not uncommon.

Herba Paris (*Paris quadrifolia*). Old Park hanging wood.

Herminium monorchis. Chalk-pit near the Duke of Portland's, Gerard's Cross, plentifully.

Hieracium boreale. Old Park Wood.

Hieracium murorum. On a wall against Hillingden Church, and on old walls of the Duke of Bedford's Garden at Chenies, Buckinghamshire.

Hippuris vulgaris. Harefield River; also in a bog on Uxbridge Moor.

Hottonia palustris. Ditches and ponds.

Hydrocharis Morsus-ranæ. Abundant in ditches and sluggish streams.

Hyoscyamus niger. Waste places, everywhere.

Hypericum Androsæmum. In a thicket near Harefield Church, and also near Bacher Heath.

Inula Helenium. In a close adjoining to Harefield Common; also in a meadow near Breakspears, called Gantlets.

Jasione montana. Lane between Denham and Iver Heath.

Lathræa squamaria. In a shady lane near Harefield town, plentifully.

Lathyrus Nissolia. In a meadow near Harefield Church, plentifully.

Littorella lacustris. Harefield Common.

Medicago maculata. Uxbridge Common, plentifully.

Melica cærulea. Heaths.

Mentha Pulegium. On Harefield Common.

Mentha rotundifolia. Harefield Churchyard.

Menyanthes trifoliata. Harefield Moor.

Mœnchia erecta. Harefield and Uxbridge Commons, abundantly.

Narcissus bifolius. In several places near Harefield.

Narcissus pseudo-narcissus. Orchard at Breakspears, plentifully.

Nuphar lutea. With the White Lily on Uxbridge Moor, and in Harefield River, near the mill, abundantly.

Nymphæa alba. On Uxbridge Moor, plentifully.

Ophioglossum vulgatum. In all the meadows near Harefield, plentifully.

Ophrys apifera. Harefield chalk-pit, sparingly; and in the chalk-pit at Gerard's Cross, plentifully.

Ophrys muscifera. Harefield chalk-pit.

Orchis militaris. Chalk-pit, near the paper-mill.

Orchis pyramidalis. Chalk-pit, near the paper-mill.

Orchis ustulata. Chalk-pit, near the paper-mill.

Orobanche major. Among the Broom at the entrance of Iver Heath, plentifully.

Papaver Argemone and *Papaver hybridum.* Both frequent among corn.

Paris quadrifolia. Old Park hanging wood, and other places near Harefield, plentifully.

Parnassia palustris. In moist meadows near Harefield Mill, particularly in a bog in the meadow next Mr. Ashby's fishing-house.

Pedicularis palustris. Meadows near Harefield Moor, plentifully.

Petasites vulgaris. Riverside, near Harefield Mill, abundantly.

Potentilla argentea. In a field near Harefield Common, sparingly.

Poterium Sanguisorba. Harefield chalk-pit, and in the Beech woods on the road to Chalfont St. Peter's.

Prunus Cerasus. In woods, rarely; is now plentiful in hedges, etc.

Pyrethrum Parthenium. In waste places, frequent.

Pyrus Aria. Uxbridge Common, and in Harefield Chalk-pit.

Ranunculus Lingua. Bogs on Iver Heath.

Ranunculus parviflorus. In several places.

Rubus idæus. Lane near Mr. Austin's farm, on Harefield Moor.

Ruscus aculeatus. Little grove near Breakspears, and in some woods near Bacher Heath.

Sambucus Ebulus. Meadow near Breakspears, and on Uxbridge Moor.

Saponaria officinalis. Hedge near Uxbridge.

Saxifraga granulata. Meadow near Moor Hall.

Scirpus setaceus. Harefield Moor, abundantly.

Sedum Telephium. In shady places, and sometimes among crops.

Sisymbrium Sophia. Manure heaps, etc., not unfrequent.

Smyrnium Olusatrum. In a lane and in some fields about Cowley, near Uxbridge, and about Windsor Castle, plentifully.

Specularia hybrida. I found it this year (1735) in a cornfield adjoining Harefield chalk-pit, plentifully, but not elsewhere.

Tanacetum vulgare. Meadow near Harefield church.

Teesdalia nudicaulis. Tuddington.

Thalictrum flavum. In marshy meadows, frequent.

Trifolium striatum. Oliver's Mount, Uxbridge Moor, plentifully.

Trifolium subterraneum. Uxbridge Common, plentifully.

Valeriana dioica. In moist meadows.

Verbascum nigrum. About fields, uncommon.

Veronica montana. Grove Wood, Breakspears.

Vinca major. Meadow near Harefield Church.

Vinca minor. In Little Grove Wood near Breakspears, also in a lane leading from Uxbridge Moor to Iver Heath.

Viola odorata. Both white and purple varieties about hedges, frequent.

Viscum album. Grows on many trees, and very rarely on the oak.

RAMBLES BY THE RIBBLE.

Buckley Hall, Buckley Delf, Ribchester Bridge, Ribbleton Moor, Higher and Lower Brockholes.

One of the scarcest and most beautiful plants of this locality, Ribbleton Moor, is the Marsh Gentian (*Gentiana Pneumonanthe*), which is abundant here, and its very ornamental dark blue blossoms may be plucked by handfuls during the latter part of July and the whole of August. This plant, like many other beauties of the vegetable realm, will ere long become a victim to utilitarianism. Another plant of equal rarity, at any rate in this county, though not of equal beauty, the Marsh St. John's-wort (*Hypericum elodes*) abounds in the margins of the shallower pools, and is frequently accompanied by the Marsh Cinquefoil (*Comarum palustre*), and the Marsh Penny (*Hydrocotyle vulgaris*), while dense masses of the beautiful Bogbean (*Menyanthes trifoliata*) occupy the inner and central portions of the same pools. The last-named plant is, like the Gentian, extremely bitter in taste, and they are both esteemed valuable tonics. An infusion of the Bogbean especially has long been a popular medicine in England. It has been used for rheumatism, gout, scurvy, ague, catarrh, and dropsy. In a pit on the eastern side of the moor the least Water Parsnip (*Sium inundatum*) is to be met with, and in several pits on the opposite side, the scarce Frogbit (*Hydrocharis Morsus-ranæ*) grows in some quantities, but the latter plant is believed to have been here introduced. The narrow-leaved Marsh Speedwell (*Veronica scutellata*), and the Marsh Violet (*Viola palustris*), not unfrequently are near neighbours in several places, and the round-leaved Sundew (*Drosera rotundifolia*) is to be met with in considerable quantities about the mossy margins of several of the pools. The heathy portions of the moor abound with the common Ling (*Calluna vulgaris*), which is occasionally accompanied by the beautiful rose-coloured blossoms of the Cross-leaved Heath (*Erica Tetralix*). The common Cotton Grass (*Eriophorum angustifolium*) is also to be met with, as well as the uncommon lesser Water Plantain (*Alisma ranunculoides*), the latter, however, seldom blossoming in this locality. A rather uncommon member of the Broom family, the Needle Greenweed (*Genista anglica*), grows in some quantity in a small portion of the moor nearest to Preston, and on the left hand side of the road from that place. This is the only known locality of the plant within many miles of our town. Its bright yellow flowers make their appearance in June, and are very ornamental. The Water Purslane (*Peplis Portula*) has been found in a ditch on the south side of the moor, and the Black Currant (*Ribes nigrum*) grows in the corner of a field in the same neighbourhood. While noticing the plants which will soon in all probability be driven from the place where they have long flourished, we may notice some other specimens of the floral world, and so perhaps please some of our non-botanical readers by "getting done" with that part of our subject. In a field in Fulwood, just over the railway from Sion Hill, grow large quantities of the Butterfly Orchis (*Orchis bifolia*) and the Wood Sage (*Teucrium Scorodonia*), and on a bank by the footpath leading from Sion Hill to the Barracks, the Trailing St. John's-wort (*Hypericum humifusum*) is plentiful. The scarce Alternate-leaved Golden Saxifrage (*Chrysosplenium alternifolium*) is to be found occasionally by the side of the brook in the same neighbourhood. Several kinds of Sedge (*Carex*) and Willow (*Salix*) grow on and about the moor. The Hairy Cardamine (*Cardamine hirsuta*) is very abundant on banks by the side of Pope Lane. This plant is much cultivated and used as a salad (under the name of Stonecress) in many parts of England, but appears to be neglected in Lancashire. A short distance down Pope Lane, in a pit in a field on the left, grows the Long-leaved Floating Pondweed (*Potamogeton rufescens*), and in pits near the cemetery the Sweet Flag (*Acorus Calamus*) is to be found. Some botanical works speak of the blossoms of this plant as being very unfrequently met with; but in a pit by the footpath from Preston to the cemetery, the plant is abundant and blossoms freely. Many other plants might be mentioned as growing in and about the moor, but those I have named are most of the scarcer kinds that are to be there met with.*

We walked through the fields to Lower Brockholes, past Boilton, a farm house snugly seated at the base of the hill midway in the amphitheatre between Higher Brockholes and Lower Brockholes. I must here notice the mossy character of some of the fields, telling of ancient forests and of subsequent ravages of water; when doubtless the river, lake-like, occupied the whole of this part of the valley. In the wood by the wayside there grows, very plentifully and very luxuriantly, the handsomest of the Fern tribe indigenous to the British Islands—the Royal Fern (*Osmunda regalis*). In the same wood, the Climbing Corydalis (*Corydalis claviculata*) is very abundant, and is scarcely to be met with elsewhere in the district, at any rate not nearer than the neighbourhood of Chorley, where it is occasionally found. The scarce Cyperus-like Carex (*Carex Pseudo-cyperus*) grows in a ditch by the side of a wood near here, and the Moneywort (*Lysimachia nummularia*) is very abundant upon a bank below a wood at Lower Brockholes. The Hemp Agrimony (*Eupatorium cannabinum*) is not unfrequent in wet places about the sides of woods both at Higher and Lower Brockholes. The whole valley about here is good ground for the botanist. About Red Scar, as well as at Brockholes, at Elston, at Samlesbury, and up to Balderston, the botanist enjoys many a ramble. The rare Broad-leaved Ragwort (*Senecio saracenicus*) grows by the Ribble side beyond Red Scar, and is reported also in some places higher up the stream. Upon one occasion, in a quiet ramble by Brockholes, I met with a person searching a cop-side for plants. I got into conversation with him, and soon found that he was a herbalist. He was not very lucky in his search; he was after Ground-ivy, which he explained was very useful for swellings and stomach complaints. Some persons have great faith in botanical remedies. I knew that Tunbrook, at Red Scar, was often visited for the berry of a plant, which is sought for from other motives than a mere love of science. I allude to the common Black Bryony (*Tamus communis*), which is said to be efficacious in the cure of black eyes, even more than the old-fashioned remedy for that not uncommon complaint,—I mean Solomon's Seal, which, in Gerarde's day, was regarded as a specific for the removal of the effects of heavy "manual exercise." The quaint old botanist says, "The root of Solomon's Seale, stamped while it is fresh and greene, and applied, taketh away in one night, or two at the most, any bruise, blacke or blew spots, gotten by falls, or womens wilfulnesse in stumbling upon their hasty husband's fists, or such like!"

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* I must here make my acknowledgments to Mr. C. J. Ashfield, the author of the Flora of Preston,' for his assistance in the botanical portions of these sketches. I am, however, not only indebted to him for this information, but also for his pleasant companionship in the greater portion of the "Rambles by the Ribble."

Reviews.

JAMES LOTHIAN'S *Garden, Flower, and Agricultural Seeds.*
JAMES LOTHIAN'S *List of Trees, Shrubs, Plants, etc.*
JAMES LOTHIAN'S *Agricultural Implements, etc.*

Mr. Lothian very considerately advises his customers that quantities of seeds are annually lost for want of attention to the place where they are sown, to the season for committing them to the earth, from slovenly ways of sowing, (sometimes too deep, sometimes not deep enough,) and by neglecting to protect them from birds, etc.

We once had a few seeds of a radish,—a sort extensively grown about Brussels,—given us in early summer, which we were instructed to commit to the soil immediately. This was done, and we soon had a large plant, with a stem full a yard high, but neither bulb nor seeds. It was a large black, dense, rather warm kind, not much smaller than a hen's egg. If Mr. Lothian would let us have a few seeds of his Black Spanish, which he directs to be sown in September or October, we would try the experiment of radish-growing again. But it is to be feared that the winters of London are not so congenial to brumal crops as the season and climate of Mull of Cantyre.

In sowing "hardy annuals," Mr. Lothian says very justly that the depth of covering should be in proportion to the size of the seeds. He tells us that all the seeds in this list may be sown from March to June, and again in September, for an early crop! Our experience is not favourable to late sowing.

Perennial seeds may be sown from May till July, and planted from September to March. In London we never succeeded with transplanted Wallflowers. They rise very freely from seed, flower next year, and then perish. If sown in spring and transplanted in autumn, barely ten in a hundred will survive the winter: with many other semi-perennials they will survive the winter and die in spring.

Anemone is unwilling to grow with us; it likes a purer atmosphere. However, we should like to give Mr. Lothian's *A. Pulsatilla* a fair chance, if he will send us a few seeds: also *Arabis alpina,* which grows vigorously with us. *Astrantia minor* we have never tried, nor *Iberis sempervirens;* we should like to give them a turn. *Stachys coccinea* we have never seen.

Mr. Lothian has a good assortment of herbaceous plants. We should like to see a specimen of his *Epilobium latifolium.*

We will gladly exchange seeds with Mr. Lothian, and have at present by us plenty of seed of *Sonchus palustris,* which is trustworthy, for we have tried it. Also there is still some of *Verbascum thapsiforme,* which have also vegetated.

While writing on this subject, it may be worth the trouble of recommending to the trade several of the alpine species, collected in the Pyrenees, and recently published in the 'Phytologist.' *Ramonda pyrenaica* is one of the rarest and handsomest of European alpines. There are, besides this fine plant, many other ornamental species which grow on the Pyrenees, and several of them would probably thrive in the British Isles.

We procured for a correspondent the addresses of two botanists who supply specimens from that district, and who would probably furnish seeds or roots as a matter of business. Their names and addresses will be sent to any of our correspondents, on application to the Editor.

The Canadian Naturalist and Geologist, Feb. 20, 1862. Montreal: Dawson and Son. London, Paris, and New York: Ballière Brothers.

In this number, page 20, there is a good article 'On the Shore Zones and Limits of Marine Plants on the North-Eastern Coast of the United States,' by the Rev. Alex. F. Kemp. The author thus explains the object of his Essay:—"I was aware that all the Handbooks on the Algæ had noted the special localities of each species, whether it grew at high or low-water mark, at half-tide or in deep water; but I was not aware that in any of the books shore-lines and limits of plant-growth had been made the subject of special treatment." The reverend author classifies the Algæ under the following zones, viz.:—

1. Those in the Drift zone, containing some of all kinds.
2. The plants in the Ulva zone. Examples: *Ulva latissima, Enteromorpha intestinalis, E. compressa, E. clathrata,* and *E. Hopkirkii.* Is the last-named a British species? *Cladophora rupestris,* etc.
3. The plants in the third zone are *Fucus nodosus, F. vesiculosus, F. furcatus.* Is the latter an English plant, etc.?

4. The plants in the Laminaria zone are *Laminaria digitata*, *L. Fascia*, *L. saccharina*, etc. Has *L. Fascia* been seen in the British seas, or on their shores?

5. The examples of the fifth zone are *Chondrus crispus* and *Laminariæ*.

6. Those of the deep-sea zone are *Laminaria longicruris* (? British), *Delesseria sinuosa*, etc. Has *D. denticulata* been detected on our shores?

We wish Mr. Lothian, who is conveniently located for the study of the species, habits, and distribution of Marine Algals, would send us the results of his experience on the subject.

BOTANICAL NOTES, NOTICES, AND QUERIES.

KEW GARDENS.

There were no fewer than 480,070 visitors to Kew Gardens in 1861, by far the largest number in any year. The past year saw the erection of the magnificent spar of Douglas Pine, 159 feet long, a superb pole, unrivalled in Europe for height, symmetry, and excellence of material. It was presented by Mr. E. Stamp. Standing among fine trees, which however are not much more than half its height, it serves to show the public the enormous size of the timber-trees of our new colony of British Columbia. The Cinchonas (trees yielding quinine) sent to the Neilgherry Hills, Sir W. J. Hooker says, are flourishing, and there are now upwards of 8000 plants in most vigorous growth, while there are 2170 more at Kew, which will be ready for transmission to India at the proper season. The experiment has been successful, too, in Ceylon, and in Jamaica as far as it has gone, but of the seeds sent to Trinidad not one has germinated.

It is now some centuries since the miraculous virtues of the "Jesuits' Bark" were made known, and apprehensions have been felt for the continuance of the supply; yet there is hardly a medicine in use which is so indispensable. Bark is one of the few real specifics with which we are acquainted. Wherever anything of a periodical character can be detected in a disease, bark acts as a remedy. Very wisely, therefore, have our botanical authorities been engaged in ensuring a supply of this invaluable medicine, and the different steps in the proceeding are curious enough. First, organized parties were dispatched into the Andes to procure young plants and seeds of the best quality. Then the plants thus obtained were received at Kew, and carefully nursed in a forcing-house erected for the purpose. Here, as every condition was skilfully adapted to the wants of the seedlings, they grew and flourished, but it would be unsafe to rely upon such artificial cultivation, or to trust to hot-houses for the replenishment of our druggists' stores. Was there no place in the British Empire where the Cinchonas—the trees yielding quinine—would grow naturally? Of course there was. India will grow anything—Tea, Cotton, Bark, or whatever England wants. So the seedlings reared at Kew were sent to India.

Herbaria Sales.

On Friday, the 7th March, 1862, a portion of the extensive and valuable Herbarium, formed by the late Comte Alfred De Limminghe, of Brussels, was sold by auction, by Mr. J. C. Stevens, at his great room, 38, King Street, Covent Garden:—

Lot 2. A fine set of Lichens, consisting of several thousands of specimens with many duplicates, £2. 4*s*.

7. Extensive collection of Gramineæ and Cyperaceæ, nearly two thousand examples, most of them named, £2. 2*s*.

15. Syria and Palestine plants, a fine set, the specimens good and in excellent preservation, all named and localized, at least 250 species, one thick parcel, £2. 12*s*.

17. Plants of the Rhine, a fine series of flowering plants, well preserved and all labelled, eleven parcels, about 1000 species, £1. 10*s*.

19. A general Herbarium of Flowering Plants, in thirty-one portfolios. The specimens are in the best possible preservation, named and arranged in generic covers, a reference being given with each genus and species to the volume, page, and number of De Candolle's 'Prodromus,' where described; there are about 6000 species, rich in Endogens, and apparently quite exclusive of Cryptogamiæ, £2. 10*s*.

22. Flora Belgica, a mounted collection of from 1000 to 2000 species, all flowering plants, eleven parcels. This was a fine lot; £2. 10*s*.

23. A thick parcel of European Labiatæ, all named, 14*s*.

24.* A collection of British Mosses and Hepaticæ, neatly mounted, named, and localized, 265 species, in five portfolios, 19*s*.

25. A most extensive set of Mosses, named and localized. This most valuable collection, which contains many thousand specimens, is most liberally represented, having numerous duplicates from different habitats, many of the specimens being mounted, with which is incorporated numerous uncoloured plates, the whole contained in four boxes, £5. 10*s*.

26. A similar set of Lichens, several thousands, in three boxes, £5. 5*s*.

27. An immense and valuable collection of Fungi, comprehending a large portion of the described European plants of this difficult and important Order; and so numerous are the duplicates from various habitats that there must be above a million specimens in all. They are almost all named, and habitats are by no means unfrequent; and incorporated in the collection are sets from the highest authorities. There are also a few plates distributed amongst the specimens which are not mounted, but the whole are contained in twenty cases, demy size, and about ten inches deep. It may be considered by far the finest and most extensive collection ever offered to the public; £20.

28. An extensive and fine set of Charæ, mostly named, in one case, apparently several hundred specimens, £2.

30. A fine and most extensive set of Algæ, named, probably several thousand, in three boxes, £3. 15*s*.

31. Miscellaneous Cryptogamiæ and a quantity of waste paper, in box, £1. 12*s*.

34. Tropical plants, including a set of Juglandaceæ, from Ceylon, Cochin China and Martinico, including a set of Juglandaceæ, collected by Wallich and J. Fraser, about 200 species, mostly named, three cases, 11*s*.

35. A long series of European Alpine plants, mostly flowering, named and localized, propably little short of 2000 species, in five cases, £2. 4*s*.

86. A collection of dried plants, from various parts of the world and from noted Botanical Gardens, nearly all named, many with notes in the handwriting of the late David Don, and Mr. A. B. Lambert (in whose herbarium they formerly were), in all about 150, fastened down on herbarium paper, in three bundles, 10*s*.

87. Australia, 1780-1791. Many interesting notes upon the papers in which these plants are preserved; they (the plants) have been gathered by some early collector and very probably by Robert Brown himself, 3*s*. 6*d*.

88. A small but very interesting collection of Charas, Potamogetons, Myriophyllums, etc., endorsed "From St. John's Wood Farm, 1801," 3*s*.

97. Three hundred Exotic Ferns, from various countries and different collectors, £2.

98. Twelve Autograph Letters or memoranda of distinguished botanists, viz., Field-

ing, Gardner (Geo.), Heysham, Hawkins, Graham, Friedrichsthal, Forder, Fischer, Acharius, Coulter, De Lessert (Benj.), and De Candolle (A. P.), 4s.

99. Twelve ditto, viz., Rayer (J.), Gardiner (W.), Cameron, Bromfield, Drége, Doubleday, De la Beche, Fenzl, Bowman, Endlicher, Fischer, De Candolle, 3s. 6d.

100. Twelve ditto, viz., Curtis (S.), De Lessert, Guthnick, De Candolle, 3s. 6d.

101. Twelve ditto, viz., Bevan, Campbell, Fenzl, Drége, and eight others, 3s. 6d.

PHALLUS IMPUDICUS.

In Yorkshire this Fungus is called the "Devil's Stinkpot;" and though we cannot understand what the first word quoted can have to do with the name of a plant, we may learn from it how great was the detestation in which it was held by our forefathers, who were fond of applying the term even to physical objects which excited their abhorrence;* and we must confess we know of no other British plant whose stench is so intolerable as this. We forbear to say what its smell is like, lest we should offend, or even incur the risk of getting the specific name of the plant, at least in its secondary sense, attached to our own signature. Suffice it to say, that the smell of a heap of turnips in a state of putrefaction, is, in our estimation, *fragrance*, compared with that of *Phallus impudicus*.

One Saturday, as we were exploring a damp wood in search of Ferns, our olfactory nerves were assailed by this awful stench; and though the plants were at least ten yards from us, we had no difficulty in making our way straight to the place where they grew, from the disgusting odour they emitted. On arriving at the spot, we found a group of about a dozen, scattered over a space a little more than three yards square. The thought immediately struck us that it would be an amusing experiment to carry home two or three plants in our vasculum, and set it on the table, to see how quickly all the inmates of the house would make their exit. We were wending our way homewards, in high glee, when two or three groups of market people met us; and, looking over our shoulder as they passed, we found they were making wry faces. On looking back, we saw them standing and eyeing us from head to foot, to see what sort of predicament we were in, apparently wondering to see all right. We were determined, however, not to be beaten, and resolutely passed on; when, meeting some more market folks who behaved in the same way, we were brought to a dead stand. Suppose we should reach the town, we saw in imagination a hundred little urchins, and as many dogs, following in our wake, the former wondering what had befallen us; therefore, coming to a bridge, we threw the plants into the Don. This, however, did not mend the matter, for we were obliged to pull up turfs of grass, with the dirt attached to their roots, and scour out the vasculum before we dared to encounter our fellow-creatures; and, even after this had been done, we were called upon to give an explanation as to where we had been, for our better half turned up her nose at us.

The economy of the *Phallus* is worth studying, for it is curious. One summer, several years ago, there was a pathway through a park, and near the path there was a shady spot where the ground was covered with the husks of beech-nuts, and other half-decayed litter. Here we detected about a dozen of these fetid funguses in an incipient state. Before producing the *thallus* and *hymenium*, the entire plant is like an egg without a shell, which hens occasionally lay when they are not supplied with calcareous matter to furnish the shell. Then the fungus had no smell; it was a gelatinous substance, shaped like an egg, and covered with a tough skin, the *volva* or veil. One or two were carefully taken up and planted in a pot, and placed in a brewhouse, and after some weeks one expanded, and became a fair, but not fragrant object, in the course of a single night. Rapidity of growth is not confined to the *Phallus*. We have known *Bovista gigantea*, one of the largest of Fungi, sometimes about a foot in diameter, grow to an immense size in a single night. RURICOLA.

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* There is another well-known plant, called "Devil's Bit." About the name Gerarde wrote the following, 726, ed. 1636:—"It (this plant) is commonly called *Morsus diaboli*, or Diuels Bit, of the root (as it seems) that is bitten off. For the superstitious people hold opinion that the diuel, for envy that he beareth to mankind, bit it off because it would be otherwise good for many uses. It is called of *Fuchsius Succisa;* in high Dutch (German) *Teuffels abiss;* in low Dutch *Duyuelles beet;* in French *Mors du diable;* in English Diuels Bit and Farebit." *Cuscuta* has a similar name; in some old herbals it is called "Devil's G–ts."

THE LONDON MARKET GARDENER.

The growth of London has pushed the market gardener gradually into the country; and now, instead of sending up his produce by his own waggons, he trusts it to the railway, and is often thrown into a market fever by a late delivery. To compensate him, however, for the altered state of the times, he often sells his crops like a merchant upon 'Change, without the trouble of bringing more than a few hand-samples in his pockets. He is nearly seventy years of age, but looks scarcely fifty, and can remember the time when there were ten thousand acres of ground within four miles of Charing Cross under cultivation for vegetables, besides about three thousand acres planted with fruit to supply the London consumption. He has lived to see the Deptford and Bermondsey gardens curtailed; the Hoxton and Hackney gardens covered with houses; the Essex plantations pushed further off; and the Brompton and Kensington nurseries—the home of vegetables for centuries—dug up and sown with International Exhibition temples, and Italian gardens that will never grow a pea or send a single cauliflower to market. He has lived to see Guernsey and Jersey, Cornwall, the Scilly Islands, Holland, Belgium, and Portugal, with many other more distant places, competing with the remote outskirts of London, and has been staggered by seeing the market supplied with choice early peas from such an unexpected quarter as French Algeria.—*Cornhill Magazine.*

Communications have been received from

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